

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.15**SOURCE INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-001279**Date Inspected:** 22-Aug-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**Location:** Changxing Dao, Shanghai**Quality Control Contact:** William (Bill) Oak**Quality Control Present:** Yes No**Material transfer:** Yes No N/A**Sampled Items:** Yes No N/A**Stock Transfer:** Yes No N/A**OK to Cut:** Yes No N/A**Rebar Test Witness:** Yes No N/A**Delayed/Cancelled:** Yes No N/A**Other:** Coatings Inspection**Bridge No:** 34-0006**Component:** Tower Splice Plates, Lift 3 East, Lift 4 West, M**Bid Item:** 77, 78, 79**Lot No:** B265**Summary of Items Observed:**

On this date Caltrans Office of Structural Materials (OSM) Quality Assurance (QA) NACE III coating inspector, Mr. James Lumley arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island in Shanghai, China. The purpose of the coating inspections are to monitor the surface preparation and coating applications for the SAS Bay Bridge project. This QA NACE III coating inspector observed the following:

**Tower Splice Plates**

Base metal surfaces of Splice plates SA101-N&S, SA102-N&S, SA170-N&S, SA235-N&S, SA98-N&S were abrasive blasted and rejected during joint inspection due to non-SSPC SP-10 surfaces and internal surfaces of bolt holes exhibited rust and corrosion products.

**Lift 3 East**

Internal surfaces of floor area and "T" stiffeners were re-abrasive blasted to base metal and an SSPC SP-10 condition and re-application of Interzinc 22 performed.

**Lift 4 West**

Cross beam bottom plate was inspected prior to final bolt up to FL-3 beams, no issues.

**Lift 3 East**

External surfaces except cross beam bottom plate was inspected for Final Topcoat inspection. Area was rejected due to low Dry Film Thickness (DFT) and non-uniform appearance.

**Miscellaneous Metal**

Base metal surfaces of 60-X38L Splice plates were abrasive blasted to an SSPC SP-10 condition and Interzinc 22 applied.

**OBG 6BE**

Unscheduled / unrequested inspection performed by Caltrans QA Lumley on external surfaces coated with

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## SOURCE INSPECTION REPORT

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Interzinc 22. Caltrans QA Lumley utilized ABF QA Dry Film Thickness (DFT) gage to ascertain and check Dry Film Thickness of applied coating over dry-spray and after removal of dry-spray per the Special Provisions. After the dry-spray was removed the (DFT) was observed to be 12.7- 50 microns in localized areas of Inspection. ABF QA was informed the work was unacceptable and repairs would be required prior to succeeding applications of the specified coating system.

### Lift 3 East

Final inspection requested of internal surfaces in ceiling and “U” Rib Stiffeners and upper Chevron connections, as well as upper floor beams. NDT is still incomplete, painters were viewed still applying coating to repair areas work was incomplete. No inspection performed. External surfaces exhibited high (DFT) readings as observed jointly with ABF QA/QC representatives and repairs were being performed.

### Lift 4 East

Lift is located on transport ship Caltrans QA Lumley observed in process application and repair work ongoing within this Lift. ZPMC requested a “Final” inspection and the work is still incomplete and visible rust viewed on “T” stiffeners and no access provided for “U” Rib Stiffeners and top of Floor Beams. ZPMC has been performing repairs on the Lift without any Notice of Inspection or supporting documentation of repairs performed and verified by either ABF or Caltrans QA.

### Cross Beam #3

Final Inspection requested by ZPMC of internal surfaces coated with Interzinc 22. Internal surfaces still had dirt and debris and construction materials strewn about. Internal was not ready for final inspection. Caltrans QA Pointed out visible rust beneath installed Catwalk grating and numerous defects to ZPMC QC.

Note: All inspections were performed jointly with ABF & ZPMC QA/QC representatives and Caltrans QA Lumley when achievable. International Protective Coatings technical service representative were available for inspections and consultation.

### Summary of Conversations:

Caltrans QA Lumley inquired with ABF QA Bill Oak as to why no Notice of Inspections were sent by ZPMC for any work/repairs associated with Lift 4 East since loaded upon the ship.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang. (858) 699-9549, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Lumley,James	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer

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